REMARKS

The applicant thanks the Examiner for the telephone interview dated December 12, 2006, in which the claims and the Foo and Vasylyev references were discussed.

The comments of the applicant below are each preceded by related comments of the examiner (in small, bold type).

8. Claims 16 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The applicant acknowledges that the examiner indicated that claims 16 and 17 would be allowable. The applicant contends that the other claims are also patentable for the reasons discussed below.

1. Claims 8-12 and 21-23 are objected to because of the following informalities:
Regarding claims 8 and 21, the recitation that the first reflective surface has a curvature such that substantially all of the reflected light rays propagate at a first angle relative to the axis that passes through the point and converge towards a region to produce uniform illumination seems to be misdescriptive of the invention. Given that substantially of the rays are propagating at the same angle from the first reflective surface, there is something missing from the claim in order for the light rays to converge. The light rays from the first reflective surface converge towards a region with other light rays from other reflective surfaces that is, they are converging with each other but by themselves the light rays from the first reflective surface do not converge towards a region to form uniform illumination. Claims 9-12 and 22-23 inherit the same issue. Appropriate correction is required.

An example of a reflective surface is the inner reflective surface 153 of ring 138 in FIG. 2 (reproduced below) of applicant's specification. Light rays reflected from different portions of the surface 153 propagate at the same angle relative to an optical axis 126. The light rays converge toward a region 167, as shown in FIG. 5 (reproduced below).

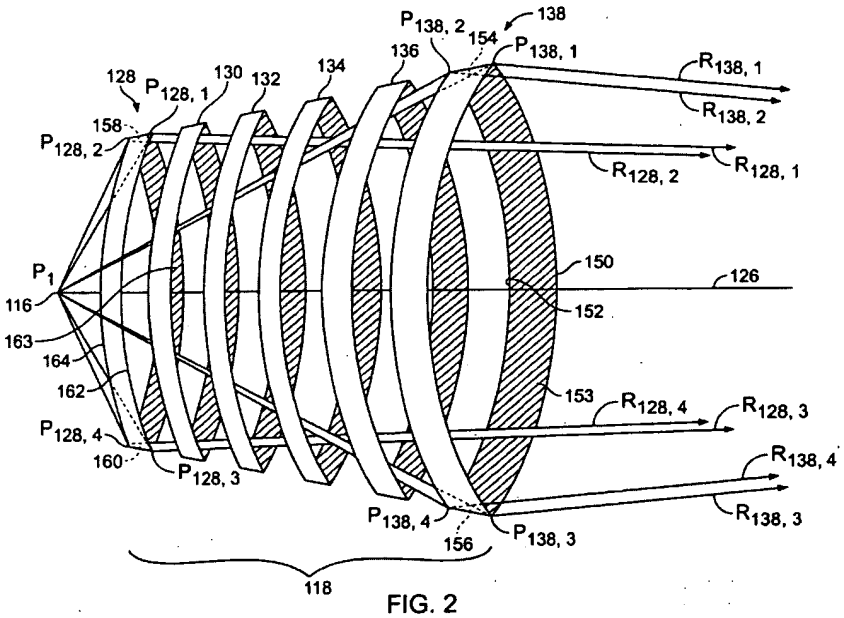

FIG. 2

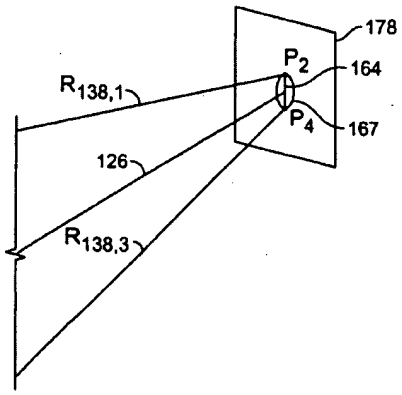

FIG. 5

For example, as described in paragraphs [0014] and [0015] of the applicant's specification, the reflective surface 153 includes portions 154 and 156. Light rays (e.g., $R_{138,1}$ and $R_{138,2}$) that are reflected by the portion 154, and light rays (e.g., $R_{138,3}$ and $R_{138,4}$) that are reflected by the portion 156 propagate at the same angle relative to the optical axis 126 and converge toward a linear region 164. Substantially all of the light rays reflected from the reflective surface 163 converge toward a circular region 167.

3. Claims 8, 11-15 and 21-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Foo US 6,231,198.

In regard to claims 8 and 21, Foo discloses (see Figure 5) an apparatus or method comprising a first reflective surface (514) to reflect light rays emanating from a point (506), the first reflective surface having a curvature such that substantially all of the reflected light rays propagate at a first angle relative to an axis that passes through the point and converge towards a region to produce uniform illumination at the region as described in column 5, lines 1-67, column 6, lines 1-67 and column 8, lines 26-30.

Foo does not disclose and would not have suggested a reflective surface having a curvature such that substantially all of the reflected light rays "propagate at a first angle relative to an axis," as recited in claim 8.

Foo discloses an optical integrator made of parabolic reflective fly's eye array that includes individual parabolic reflective segments. FIGS. 5A to 5D of Foo show an optical

integrator having parabolic reflective segments, in which each parabolic reflective segment reflects light rays from a coaxial source S into a secondary point source S' 508 (col. 5, lines 19-21). As shown in FIG. 5C of Foo, the different light rays reflected by a parabolic reflective segment propagate at different angles (e.g., $\theta - \alpha$, θ, and $\theta + \alpha$) relative to an axis and converge at a point 508. The light rays do not propagate at a first angle relative to an axis, as recited in claim 8.

Claims 9-12 are patentable for at least the same reasons as those applied to claim 8.

Claims 21 and 24 are patentable for at least reasons similar to those applied to claim 8.

Claims 22 and 23 are patentable for at least the same reasons as those applied to claim 21.

Claims 25 and 27 are patentable for at least the same reasons as those applied to claim 24.

In regard to claim 13, Foo discloses (see Figure 5) an apparatus comprising a reflective surface (514) positioned relative to an optical axis to reflect light rays emanating from a location (506) on the optical axis so that the light rays converge towards a region on a plane (520, 542) perpendicular to the optical axis, the reflective surface having a curve segment that comprises a section of a parabolic curve (512) that has a focal point at the location and has been rotated through an angle relative to the optical axis about an axis of rotation that is non-parallel to the optical axis as shown in Figures 5A-5D and as described in column 5, lines 1-67 and column 6, lines 1-67.

Foo does not disclose and would not have suggested a curve segment that comprises a section of a parabolic curve that has a focal point at a location on the optical axis and has been rotated through an angle relative to the optical axis about "an axis of rotation that is non-parallel to the optical axis," as recited in claim 13.

Foo discloses parabolic reflective segments 502 that are each formed from an off-axis segment of a parent parabolic surface. Foo uses an off-axis segment so that a working surface 520 can be located outside a collimated beam 504 (see FIG. 5B and col. 5, lines 52-54). Foo does not disclose that any of the parabolic reflective segments 502 is rotated relative to the optical axis , let alone rotated about an axis of rotation that is non-parallel to the optical axis, as recited in claim 13.

Claims 14-17 are patentable for at least the same reasons as those applied to claim 13.

4. Claims 24-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Vasylyev et al US 6,620,995.

In regard to claim 24, Vasylyev et al teaches (see Figures 1, 2, 5, 6) a method comprising providing a first reflective surface (18) to reflect light rays emanating from a location, the first reflective surface having a curvature such that reflected light rays propagate in a direction at a first angle with an axis and converge toward a region to produce uniform illumination at the region as shown in Figures 1, 5 and 6, and providing a second reflective surface (18) to reflect light rays emanating from the location, the second reflective surface having a curvature such that reflected light rays propagate in a direction at a second angle with the axis and converge toward the region, the second angle different from the first angle as can in seen in Figures 1, 5 and 6 and as described in column 3, lines 51-67 and column 4, lines 1-24.

10. ... Applicant's arguments filed on 27 June 2006 in regard to claims 24-26 (Vasylyev) have been fully considered but they are not persuasive. Applicant argues that each concave reflective element of Vasylyev does not have a curvature such that "substantially all of the reflected light rays propagate at a first angle relative to an axis". In response to this argument, the Examiner would like to point out that the current recitation of claim 24 does not recite that "substantially all of the reflected light rays propagate at a first angle relative to an axis". Rather, it only recites that the first reflective surface and the second reflective surface "reflect light rays". Therefore, Examiner believes that Vasylyev (as shown in Figure 5) meets the current limitation and the rejection for claims 24-26 is maintained.

Vasylyev does not disclose and would not have suggested a first reflective surface having a curvature such that substantially all of the light rays reflected from the first reflective surface propagate in a direction "at a first angle with an axis," and a second reflective surface having a curvature such that substantially all of the light rays reflected from the second reflective surface propagate in a direction "at a second angle with the axis," as recited in amended claim 24.

Vasylyev discloses the use of a plurality of coaxial ring-like elements 14 having inner reflective surfaces 18 to reflect light rays. The inner reflective surfaces 18 each has a parabolic profile such that the light rays propagate at different angles relative to the optical axis and converge toward a receiver 16 (see FIG. 5 and col. 3, lines 63-66).

Claims 25-27 are patentable for at least the same reasons as those applied to claim 24.

Any circumstance in which the applicant has addressed certain comments of the examiner does not mean that the applicant concedes other comments of the examiner. Any circumstance in which the applicant has made arguments for the patentability of some claims does not mean that there are not other good reasons for patentability of those claims and other claims. Any circumstance in which the applicant has amended or canceled a claim does not mean that the

applicant concedes any of the examiner's positions with respect to that claim or other claims.

The requisite extension of time fee is being paid electronically with this submission. Please charge any deficiency in fees or credit any overpayment to deposit account 06-1050.

Respectfully submitted,

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